

Appl. No.: 09/932,779
Amdt. Dated December 11, 2003
Reply to Office Action of November 10, 2003

REMARKS/ARGUMENTS

Reconsideration of the above-identified patent application is respectfully requested in view of the foregoing amendments and following remarks. Claims 1, 3, 12 and 14 have been amended. Claims 8-11 and 19-22 have been cancelled. Claims 1-7 and 12-18 remain in the application.

The above-identified patent application relates to a method of fabricating three-dimensional solids that have a seamless depression or projection capable of holding liquid and that simulate natural materials, such as stone, granite, or marble.

Claims 1, 2, 4, 5, 6, 7, 12, 13, 15, 16, 17, and 18 were again rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 6,083,339, issued on July 4, 2000 to Chris R. Peters et al. for BOWLS COMPRISING ACRYLIC PLASTICS FILLED WITH ALUMINA TRIHYDRATE, AND PROCESSES FOR MAKING SAME. The PETERS process and Applicants' method both include the use of identical material and a female mold, but that is the extent of the similarities.

According to col. 8, lines 31 - 40 of PETERS, the "proper size blank [is] not ... any larger or significantly any larger than the amount of material needed to define the bowl." In other words, PETERS trims to the edge of the bowl. Applicants' method, on the other hand, expressly sizes the blank so that its dimensions are greater than the cavity of the mold. This is advantageous in making shower pans, for example, since the excess acrylic material around the edges is used to form the flange necessary to attach the molded unit to a frame or to the underside of a countertop. Applicants' independent claims 1 and 12 have been suitably amended to recite this feature.

The most significant difference between PETERS and the present invention is recited as step (b) of claims 1 and 12:

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"creating a vacuum within the vacuum mold...." The PETERS apparatus is a compression mold, as evidenced by a male bowl-shaped member 48 that compress-forms the blank into the female bowl-shaped cavity 48 (col. 11, lines 29 - 30). Physical, power-driven, compression force is used (col. 11, lines 37 - 40).

The misinterpretation of PETERS as having a vacuum-producing step (Office Action para. 8, lines 5+ and para. 9, lines 5+)), such as recited in Applicants' claims, may be due to the presence of a hole 60 in PETERS, shown in FIGS. 5, 6 and 7 thereof and the speculative statement in PETERS, col. 11, lines 57 - 60. The hole 60 shown in PETERS is used not to pull a vacuum (there is no vacuum pump in the PETERS purely mechanical apparatus), but to be passive, allowing air to escape, as the compression of the blank forces entrapped air out of the mold (col. 13, lines 57 - 62). The hole 60 can also be used to introduce air into the cavity 46 in order to cool and release the formed blank (*Id.*). This, of course, is a teaching opposite to the presently claimed invention, which pulls a vacuum (step (b)), by means of a center hole 14 connected to a vacuum providing conduit 16 (Applicants' specification, page 8, line 10).

In order to modify PETERS so as to use a vacuum system to conform the blank to the mold, a vacuum pump would have to be provided and connected to hole 60 or elsewhere. Such a pump is not shown or referenced by PETERS, so the suggestion that a vacuum could be employed is wholly without enablement, and should not be afforded any more weight than a hypothetical statement without basis in physical structure. Moreover, PETERS states that a vacuum in the female mold cavity could result in "the male mold component [being] assisted," but nowhere in PETERS is the assertion made that a vacuum by itself could achieve the desired result. This feature is now recited in the amended claims 1 and 12. Accordingly, **the Office has not shown a vacuum method** of fabricating a fixture that uses the steps recited in Applicants' claims, as presently amended. For these reasons, the rejection of claims

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1, 2, 4, 5, 6, 7, 12, 13, 15, 16, 17, and 18 is respectfully traversed.

Claims 1, 2, 3, 4, 6, 7, 12, 13, 14, 15, 17, and 18 were again rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,074,770, issued on December 24, 1991 to Peter U. Graefe for INTEGRATED VACUUM FORMING/REACTION INJECTION MOLDING APPARATUS FOR MANUFACTURING A SHAPED POLYMERIC LAMINATE ARTICLE.

GRAEFE incorporates a reaction injection molding process, whereas the present invention relies solely on the vacuum and mold; GRAEFE's process is for the formation of a shaped polymeric laminate article possessing a thermoplastic resin layer, whereas Applicants' invention is for a single layer product, not a laminate; and finally, GRAEFE utilizes various chemical compounds either to give the preform an adhesive coating or to change the chemical composition of the material being molded. Whereas GRAEFE uses plasma or chemical reactive gas to change the polymeric structure, Applicants use neither of these processes. Whereas GRAEFE has a glass fiber web preform reinforcing layer 43 sandwiched between layers 30 and 39 (Fig. 6), Applicants provide a foam support layer for sound deadening and insulation below the cosmetic layer.

The PETERS process also allows the blank to remain generally unrestrained, allowing the edges to move upward to minimize tension loads during forming. On the contrary, Applicants' method teaches the use of a minimal degree of restraint through the use of a retention or slip ring placed over and surrounding the periphery of the heated piece. The purpose of the ring is to cause the top of the shower pan flange portion to remain flat and wrinkle free, thereby creating the flange portion. Applicants' claims 3 and 14 have been suitably amended to recite this feature.

Claims 5 and 16 were rejected based on 35 U.S.C. §103(a) as being unpatentable over GRAEFE in view of PETERS. Again, it would not make sense, nor is there any suggestion of, or

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motivation for, the PETERS apparatus to be modified by the GRAEFE disclosure, as a vacuum would be redundant after the mold is formed by compression.

The fact that Applicants pull a vacuum as an essential step, make use of a retention ring, and Applicants' method results in the creation of a single unit including a flange, is believed to be significant enough to distinguish the present invention from the prior art.

In view of the foregoing amendments and remarks, Applicants respectfully request that claims 1 - 7 and 12 - 18 be allowed and the application be passed to issue.

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